R E P O R T R E S U M E S

ED 017 413 RE 001 140

THE PEABODY-CHICAGO-DETROIT READING PROJECT--A REPORT OF THE SECOND-YEAR RESULTS.

BY- WOODCOCK, RICHARD W.
GEORGE PEABODY COLL. FOR TEACHERS, NASHVILLE, TENN.

REPORT NUMBER IMRID-4-15 PUB DATE AUG 67
EDRS PRICE MF-$0.25 HC-$0.72 16P.

DESCRIPTORS- *READING RESEARCH, READING INSTRUCTION, *BEGINNING READING, READING ACHIEVEMENT, *EDUCABLE MENTALLY HANDICAPPED, LANGUAGE EXPERIENCE APPROACH, INITIAL TEACHING ALPHABET, BASIC READING, PROGRAMED TEXTS,

THE PEABODY-CHICAGO-DETROIT READING PROJECT, A 3-YEAR PROJECT, COMPARED SIX APPROACHES FOR BEGINNING READING INSTRUCTION TO YOUNG EDUCABLE MENTAL RETARDATES--(1) THE LANGUAGE-EXPERIENCE APPROACH (LE) USING TRADITIONAL ORTHOGRAPHY (TO), (2) LE USING I/T/A, (3) THE BASAL READER APPROACH (BR) USING TO, (4) BR USING I/T/A, (5) BR USING THE REBUS, AN APPROACH DEVELOPED AT PEABODY, AND (6) A PROGRAMED TEXTBOOK APPROACH USING TO. EACH OF THESE APPROACHES IS DESCRIBED. DURING THE FIRST YEAR OF THE PROJECT, INSTRUCTIONAL PROGRAMS AND MATERIALS WERE ORGANIZED AND TRIED OUT, AND SCHOOL DISTRICTS AND TEACHER-PARTICIPANTS WERE SELECTED. THE TEACHERS, RANDOMLY ASSIGNED TO THE SIX APPROACHES, USED THE ASSIGNED APPROACH IN CLASSES WITH THOSE CHILDREN AT THE READINESS OR BEGINNING READING STAGES. AFTER 2 YEARS OF INSTRUCTION, THE RESULTS OF STANDARDIZED TESTS GIVEN TO 321 PUPILS IN 85 CLASSES SHOWED A MEAN GAIN OF 5 1/2 MONTHS. NO SIGNIFICANT DIFFERENCES AMONG ANY OF THE APPROACHES WERE NOTED, IMPLYING THAT INSTRUCTIONAL APPROACH DID NOT AFFECT SIGNIFICANTLY THE READING ACHIEVEMENT OF YOUNG EDUCABLE MENTAL RETARDATES DURING THE FIRST 2 YEARS OF INSTRUCTION IF THEY WERE NONREADERS AT THE OUTSET. THIS PAPER WAS PRESENTED AT THE FOURTH ANNUAL I.T.A. CONFERENCE (MONTREAL, AUGUST 11, 1967). (NS)

IMRID

INSTITUTE ON MENTAL RETARDATION AND INTELLECTUAL DEVELOPMENT

A UNIT OF THE

John F. Kennedy Center for Research on Education and Human Development

GEORGE PEABODY COLLEGE FOR TEACHERS/NASHVILLE, TENNESSEE 37203

ED017413

THE PEABODY-CHICAGO-DETROIT READING PROJECT— A REPORT OF THE SECOND-YEAR RESULTS

by

Richard W. Woodcock

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Volume IV No. 15

1967

RE001 140

THE PEABODY-CHICAGO-DETROIT READING PROJECT-- A REPORT OF THE SECOND-YEAR RESULTS*

A paper presented to the Fourth International i.t.a. Conference on August 11, 1967 at McGill University in Montreal, Canada

by

Richard W. Woodcock, Senior Scientist**

Institute on Mental Retardation and Intellectual Development
George Peabody College
Nashville, Tennessee

The primary purpose of this project was to compare six different approaches for teaching beginning reading to educable mentally retarded pupils. Two of these approaches utilized the Initial Teaching Alphabet as the beginning medium for reading instruction. The project began in June of 1964 and will terminate in November of 1967 upon completion of the final report. The classroom phase of the project began in September 1965 and continued until June 1967. All pupils participating in the project were essentially non-readers at the time of their entrance into the study. Altogether 834 pupils and 112 teachers participated in the study. Of these numbers, 321 pupils in 85 classes were in the study for the entire two year period. Ninety-four of these subjects, in 25 classes, were assigned to one of the two experimental approaches using i.t.a.

Description of the Experimental Approaches

Six approaches for teaching beginning reading to EMR pupils were compared and evaluated in the Peabody-Chicago-Detroit Reading Project.

RE 001 140

*"Efficacy of Several Approaches for Teaching Reading to the Educable Mentally Retarded". A three-year research and demonstration project supported by the U. S. Office of Education under the provisions of Title III, Section 302, of Public Law 88-164. Also supported in part by the Institute on Mental Retardation and Intellectual Development under a grant from the National Institute of Child Health and Development.
**Associate Investigators on this project have been Lloyd M. Dunn and Philip Pfost.

These six approaches were as follows:

1. A language-experience approach using traditional orthography (LE-TO)
2. A language-experience approach using the Initial Teaching Alphabet (LE-ITA)
3. A basal reader approach using traditional orthography (BR-TO)
4. A basal reader approach using the Initial Teaching Alphabet (BR-ITA)
5. A basal reader approach using rebus (BR-REBUS)
6. A programmed text approach using traditional orthography (PT-TO)

The similarities and differences among the six approaches are portrayed in Figure 1. The vertical dimension of Figure 1 projects the differences among approaches in respect to the degree of structuring. Language-experience approaches are the least structured and are designed to capitalize upon speaking vocabulary, interests and experiences of the pupils. Programmed texts are highly structured and are planned to insure that each child will be exposed to a carefully graded sequence of learning activities. Basal reader approaches are moderately structured, thus falling between language-experience and programmed text approaches.

The horizontal dimension of Figure 1 projects differences among the experimental approaches in respect to the medium used during the initial stages of reading instruction. The "TO" approaches (traditional orthography) are those which make use of the standard English alphabet. The "ITA" approaches utilize the 44 sound-symbols of the Initial Teaching Alphabet developed by Sir James Pitman. The "ITA" approaches are two-stage approaches for teaching reading in which pupils first learn to read in i.t.a., then make transition to reading TO. The "REBUS" approach, being developed at Peabody, is also a two-stage approach. Pupils first

learn to read with a vocabulary of picture-symbols (rebuses) instead of spelled words. After the pupil gains proficiency in reading with the picture-symbols, he begins a controlled program of phasing spelled words into the text in place of the rebuses. Examples of the rebus vocabulary and an illustrative rebus passage are shown in Figure 2. Each of these six approaches is briefly described below.

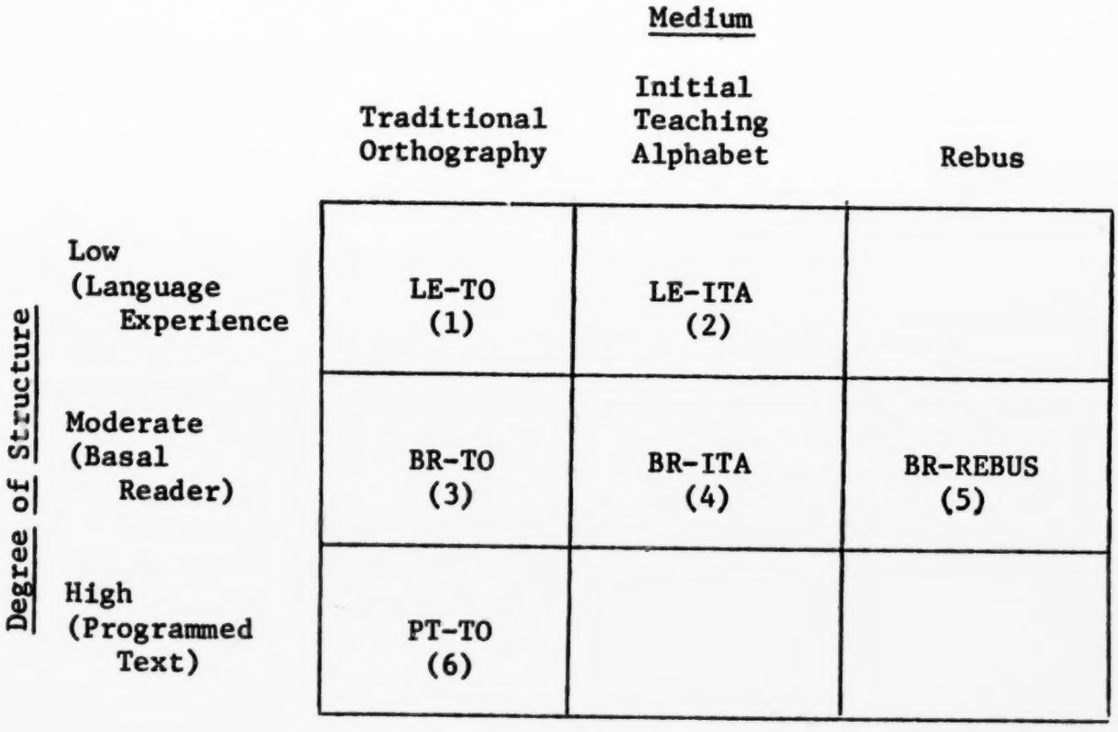

Figure 1. The six approaches compared in the Peabody-Chicago-Detroit Reading Project.

The language-experience approach using traditional orthography (LE-TO). A language-experience approach is based upon the premise that a reading program should be highly flexible in order to take advantage of a child's speaking vocabulary, his current and past experiences, and his interests. This approach is characterized by "experience chart" and "self-selection" procedures in contrast to the ready-made instructional materials

associated with other approaches. The LE-TO approach utilizes the traditional 26-letter alphabet. Professional texts by Herrick and Nerbovig (1964) and by Lee and Allen (1963) were provided as guides for each teacher to follow in conducting the language-experience approach.

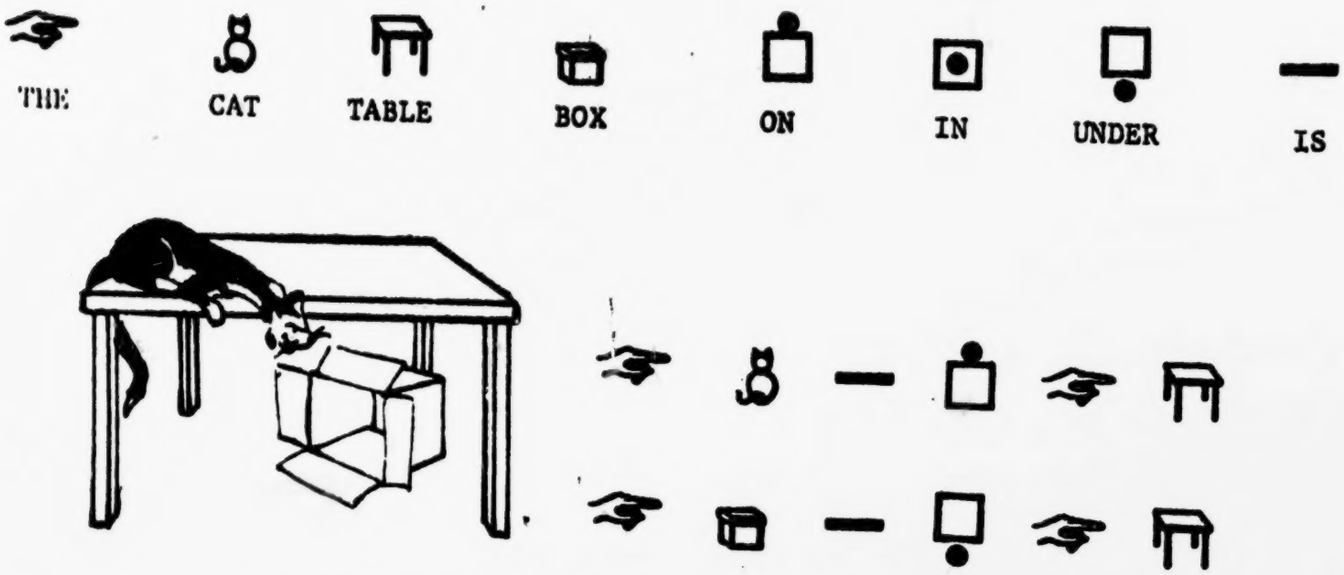

Figure 2. Illustrative rebus vocabulary and passage.

The language-experience approach using the Initial Teaching Alphabet (LE-ITA). The i.t.a. language-experience approach is based upon the same premise as the TO language-experience approach. The only difference between the two approaches is that the LE-ITA approach utilizes the Initial Teaching Alphabet rather than TO. The LE-ITA approach made extensive use of experience charts early in the program, and later shifted to an emphasis on reading trade books written in i.t.a. Each i.t.a. teacher shared a collection of 300 easy reading i.t.a. books with two other i.t.a. teachers.

Most of the students in this approach went through a transition program during the second year of the study using the Workbook to

Accompany Books 6 and 7 (Tanyzer & Mazurkiewicz, 1964) as the core of their transition program. The teachers in the LE-ITA approach were furnished the same professional references as the teachers in the LE-TO approach. In addition they received training in reading and writing i.t.a. through the use of a self-study workbook (Woodcock, 1965) and in-service meetings.

The basal reader approach using traditional orthography (BR-TO). A basal reader approach is characterized by the use of a coordinated series of readers, workbooks, and teacher's manuals. Such a series provides the teacher with a complete ready-made package of instructional material for teaching reading. The Harris and Clark series (1965), published by Macmillan, was selected for use in this experimental approach. The Harris and Clark series utilizes the 26-letter alphabet.

The basal reader approach using the Initial Teaching Alphabet (BR-ITA). The BR-ITA approach was similar to the BR-TO approach except for the use of the Initial Teaching Alphabet. Table 1 summarizes the sequence of materials used by the teachers in this approach. They began by using the Auditory Discrimination Cards (Downing,). The next step was to use the first five Downing Readers (Downing, 1963). These readers were supplemented by a workbook prepared by one of the project teacher-consultants (Kelly, 1965). The remaining five Downing readers were used next. At the same time the pupils worked through Ready for Reading of the Early-to-Read series (Tanyzer & Mazurkiewicz, 1964). Subsequently the pupils worked through Book 4 of the Early-to-Read series. The Early-to-Read materials were not continued beyond this point, however, except to use the workbook for Books 6 and 7 during the transition program. In addition to the basic instructional materials, all supplementary

materials and manuals on the market at the start of the project were used. The BR-ITA teachers were furnished the same set of 300 i.t.a. trade books used by the LE-ITA teachers for the supplementary reading portion of their programs. The BR-ITA teachers learned i.t.a. through the use of the self-study workbook by Woodcock (1965) and in-service meetings.

TABLE 1

SEQUENCE OF BR-ITA MATERIALS

Downing Materials	Early-to-Read i/t/a Program
Auditory Discrimination Cards	
Downing Readers: Books, 1,2,3,4, Rev. A Kelly, My i.t.a. Workbook	
Downing Readers: Books 5,6,7,8, Rev. B	Ready for Reading
	Dinosaur Ben Houses
	Books 2,3,4
	Workbook for Books 6 and 7

The basal reader approach using rebuses (BR-REBUS). The unique aspect of this approach was the use of rebuses as the first step in learning to read. Pupils develop a rather extensive rebus vocabulary soon after they begin to receive instruction in this medium. After the child gains proficiency in rebus reading, he proceeds through a transition program, gradually substituting spelled words in place of the rebuses. An experimental edition of the "Rebus Reading Series" (Woodcock, 1965-1966) was developed for use by the BR-REBUS group. This series consisted of readers, workbooks, teacher guides, and supplementary

materials. At the completion of the rebus program the teachers moved into the primer level of any basal reading series of their choice.

The programmed text approach using traditional orthography (PT-TO). A programmed approach to reading instruction is based upon the belief that a child should be taken through a carefully devised series of steps in the process of learning to read. Each child in a programmed approach must respond actively to each step in the program. Following his response, the child learns immediately whether his response was correct or not. The programmed materials selected for this approach were those prepared by Sullivan and published by McGraw-Hill (Sullivan, 1963). This program is essentially comprised of a series of programmed workbooks through which each child proceeds frame-by-frame. The workbooks are supplemented by other materials including filmstrips and story books. The McGraw-Hill program is written in traditional orthography.

Selection of Experimental Teachers and Pupils

Experimental teachers volunteered for this assignment in the Spring of 1965. The project director met with interested teachers and explained the project and the responsibilities of an experimental teacher. Teachers who volunteered to participate in the project were randomly assigned into the six reading approaches. There was one exception to this procedure--teachers who had any strong adverse feelings about being assigned to one particular approach were given the opportunity to indicate this. About one-third of the teachers indicated such aversions and these were honored by randomly assigning those teachers into one of the five remaining approaches. All teachers involved in the project had had at least one year of experience in teaching EMR children.

A total of 607 pupils, enrolled in 112 classes, participated as

experimental subjects at the beginning of the project. The number of subjects in each of these classes varied from two to twelve, and averaged five. The entire class was not included since the aim of the project was to gather information on the results of beginning reading instruction.

Three hundred twenty-one pupils in 85 classes were still in the study by June 1967. These 321 subjects contributed the data of primary concern in this study. In September 1965 the mean chronological age of the 321 subjects was eight years and eight months, the mean IQ was 66, and the mean mental age was five years and nine months. At the end of the project the mean chronological age was ten years and five months, and the mean mental age was six years and nine months. Table 2 summarizes the CA, IQ, and MA data of the experimental subjects. (All chronological ages and mental ages have been adjusted to October 31, 1966 as the basis for comparison.) These means were tested by the analysis of variance for significant differences among the six approaches. There were no significant differences among CA's, IQ's or MA's at the .10 level of significance.

Procedure

The project was scheduled for three years, beginning in June 1964, and extending until November 1967. During 1964-65 the project staff wa. engaged in specifying and organizing the instructional programs and materials associated with each of the six approaches. Additional tasks accomplished during the first year of the project included completing several small-scale pilot studies related to the feasibility of the rebus approach and selecting the school districts and teachers to participate in the demonstration phase of the study. The demonstration phase

began in September 1965 and was completed in June of 1967. During this two-year period each teacher was asked to use her assigned approach and materials with those children in her class who were at the readiness and beginning stages of learning to read.

TABLE 2

CA, IQ, AND MA SUMMARY DATA

Approach	No. of Classes	No. of Subjects		CA (10/31/66)	IQ	MA (10/31/66)
LE-TO	14	60	$\bar{X}$	118.9	65.9	78.1
			s	14.8	8.0	7.9
LE-ITA	10	42	$\bar{X}$	115.8	67.0	77.3
			s	12.8	9.3	9.6
BR-TO	16	59	$\bar{X}$	119.1	65.2	77.0
			s	13.6	9.2	10.4
BR-ITA	15	52	$\bar{X}$	120.6	65.8	78.7
			s	15.5	10.4	11.3
BR-REBUS	17	74	$\bar{X}$	115.6	68.0	77.8
			s	15.3	9.9	8.6
PT-TO	13	34	$\bar{X}$	117.8	64.4	75.3
			s	16.1	9.4	10.3
TOTAL	85	321	$\bar{X}$	117.9	66.2	77.5
			s	14.8	9.5	9.6
			F-ratio	1.37	1.02	0.59

One teacher from each approach, in each city, was assigned additional responsibilities as a teacher-consultant. The teacher consultants were responsible for coordinating the activities of their group, chairing in-service meetings, distributing material, and in other ways facilitating the administration of the project. These teacher-consultants were brought to Peabody College during the Summer of 1965

for one month. During this month they were responsible for becoming thoroughly familiar with the approach and materials to be used by their group. In addition, they studied the other five approaches and participated in the overall planning and preparation for beginning the classroom phase of the project.

The equivalent of three half-day in-service meetings were held early in September 1965 to assist the experimental teachers in understanding their role and in becoming better prepared to use their assigned approach. During the remainder of the project each group of teachers had in-service meetings every month or two. The primary purpose of these meetings was to discuss common problems facing the group and to allow an exchange of ideas. Each teacher in the study was provided specific information in respect to the techniques and materials which were appropriate for her to use as part of that experimental approach.

Two aspects of the instructional program were common to all the approaches. First, there was an extensive program of supplementary reading utilizing materials drawn from classroom and library collections, and supplemented by project acquisitions, such as the collections of i.t.a. trade books. Second, the Peabody Language Development Kits (PLDK) (Dunn & Smith, 1965, 1966) were furnished each experimental teacher. PLDK Level #1 was used during the first year of the project and the Level #2 during the second year. The use of these kits provided a greater degree of standardization in respect to the total language arts program. The kit was used daily with the entire class for about 30 to 40 minutes. PLDK lessons provide activities designed to develop oral expression, oral receptive and verbal reasoning skills. No reading or writing per se

is involved.

Instrumentation

The evaluation instruments used in this project included the Metropolitan Achievement Tests (MAT) by Durost and others (1959); the Primary Mental Abilities Tests (PMA) by Thurstone and Thurstone (1963); and the Beginning Reading Tests (BRT) by Woodcock and Pfost (1967).

The Primary Mental Abilities Test. The PMA for grades K-1 was administered to all experimental subjects during the Fall of 1965 and again during the Fall of 1966. These tests were administered by the classroom teachers to children participating as experimental subjects. The tests were scored by project staff at Peabody College.

The Metropolitan Achievement Tests. The reading subtests of the Primary I Battery of the MAT were administered to all experimental subjects in June of 1966 and again in June of 1967. The MAT reading subtests include measures of Work Knowledge, Word Discrimination and Reading. The TO edition of this battery was used with all subjects. Tests were administered by members of the project staff who went into the classrooms in Chicago and Detroit for this purpose.

The Beginning Reading Test. The BRT contains subtests of Letter Recognition, Word Reading, Sentence Reading and Comprehension. The entire test is in traditional orthography. This test was developed to meet the needs for an instrument which would discriminate among children who are achieving at the early levels of first grade achievement in reading. The Letter Reading subtest contains 40 items presenting a discriminating mixture of upper and lower case, sans-serif and Roman style letters. The Word Reading test contains a set of 60 words drawn from those words most commonly found in beginning reading programs. The

Sentence Reading test is a set of 60 sentences to be read at sight. The Comprehension test contains 50 items. The items in each subtest are arranged in order of difficulty and a cutting score is used to terminate each subtest for a subject. Table 3 presents split-half reliabilities corrected for length by the Spearman-Brown formula, for three of the subtests. Also included in Table 3 are the intercorrelations among the subtests.

TABLE 3

BEGINNING READING TEST

RELIABILITIES AND SUBTEST INTERCORRELATIONS

	Letter Recognition	Word Reading	Sentence Reading
Letter Recognition	.97*		
Word Reading	.69	.98*	
Sentence Reading	.64	.95	.98*
Comprehension	.59	.85	.85

*Split-half reliabilities corrected for length.

Results

During June of 1967, all experimental subjects were administered the MAT and the BRT, providing a set of seven criterion scores for each pupil. The means of these criterion measures, by approach, and for the total group are presented in Table 4. The means for subtests of the MAT are expressed in grade equivalents and the means for the BRT subtests

are expressed in raw score units. The differences among means for each of the criterion measures was tested by the analysis of variance. Table 4 presents the results of these analyses. None of the criterion measures differed significantly among the approaches at the .05 level of significance.

TABLE 4

SUMMARY DATA: JUNE 1967 CRITERION MEASURES

Approach		Metro. Achiev. Tests			Beginning Rdg. Test			
		WK	WD	Rdg.	LR	WR	SR	Comp.
LE-TO	n	59	59	59	60	60	60	60
	$\bar{X}$	1.66	1.67	1.58	29.2	32.4	21.6	25.3
	s	0.33	0.47	0.31	11.2	20.5	17.9	15.2
LE-ITA	n	38	38	38	42	42	42	42
	$\bar{X}$	1.61	1.58	1.55	24.4	23.3	14.5	19.9
	s	0.38	0.39	0.36	13.7	19.8	17.5	15.2
BR-TO	n	56	56	56	59	59	59	59
	$\bar{X}$	1.58	1.54	1.56	29.8	25.4	16.2	20.2
	s	0.40	0.46	0.43	11.4	18.6	16.1	15.6
BR-ITA	n	46	46	46	52	52	52	52
	$\bar{X}$	1.59	1.60	1.48	29.3	25.4	16.8	18.2
	s	0.38	0.59	0.34	11.6	18.3	16.3	14.0
BR-REBUS	n	66	66	66	74	74	74	74
	$\bar{X}$	1.56	1.53	1.50	28.7	25.5	17.2	20.4
	s	0.47	0.36	0.35	11.2	17.8	16.3	14.0
PT-TO	n	32	32	32	34	34	34	34
	$\bar{X}$	1.56	1.48	1.47	30.5	23.4	14.3	21.1
	s	0.52	0.51	0.35	9.5	17.9	15.5	14.4
TOTAL	n	297	297	297	321	321	321	321
	$\bar{X}$	1.59	1.57	1.53	28.7	26.2	17.1	20.9
	s	0.41	0.47	0.36	11.6	19.1	16.8	14.9
F-ratio		1.78	1.27	1.72	1.48	1.68	1.29	1.49

Summary and Discussion

Six approaches for teaching reading to young, educable mentally retarded pupils were compared in the Peabody-Chicago-Detroit Reading Project. At the beginning of the two-year classroom phase of the project, the 321 experimental subjects had a mean mental age of five years, eight months; a mean chronological age of eight years, eight months; and a mean IQ of 66. All subjects were non-readers or essentially so at the beginning of the study. These subjects were administered seven reading achievement measures in June 1967. The mean gain in the various subtests was approximately five and one-half months. No significant differences among any of the approaches was noted in this study. These results suggest that with young EMR children, relatively little gain is to be expected during the first two years of instruction if they are non-readers at the time of initiating instruction. Furthermore, it would appear that approach does not have a significant effect on reading achievement at this stage.

References

Downing, John A. Auditory Discrimination Cards. London: Initial Teaching Publishing Co.

Downing, John A. The Downing Readers. London: Initial Teaching Publishing Co., 1963.

Dunn, Lloyd M. & Smith, James O. The Peabody Language Development Kits, Levels 1 and 2. Circle Pines, Minnesota: American Guidance Service, 1965, 1966.

Durost, Walter N. (Ed.) Metropolitan Achievement Tests. New York: Harcourt, Brace & World, 1959.

Harris, Albert J. & Clark, Mae. The Macmillan Reading Program. New York: Macmillan, 1965.

Herrick, Virgil E & Nerbovig, Marcella. Using Experience Charts with Children. Columbus, Ohio: Charles E. Merrill Books, 1964.

Kelly, Clark. My i.t.a. Workbook. Nashville: Institute on Mental Retardation and Intellectual Development, 1965.

Lee, Dorris. M., & Allen, R. V. Learning to Read Through Experience. New York: Appleton-Century Crofts, 1963.

Sullivan Associates. Programmed Reading. New York: McGraw-Hill, 1963.

Tanyzer, Harold J. & Mazurkiewicz, Albert J. Early-to-Read i/t/a Program. New York: Initial Teaching Alphabet Publications, 1964.

Thurstone, L. L. & Thurstone, Thelma G. Primary Mental Abilities Test. Chicago: Science Research Associates, 1963.

Woodcock, Richard W. i.t.a. for Teachers. Nashville: Counselor Tests and Recordings, 1965.

Woodcock, Richard W. (Ed.) The Rebus Reading Series, Experimental Edition. Nashville: Institute on Mental Retardation and Intellectual Development, George Peabody College, 1965, 1966.

Woodcock, Richard W. & Pfost, Philip. Beginning Reading Test. Nashville: The authors, 1967.